



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5795-7

Job Sheet 207579



POSITIVE RECALL

EFFECTIVE 3/12/20 WITH MRK

RELEASED DATE

Part No: D5795-7

Job Qty: 12 pcs

Part Name: Rib



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 2/27/20

Job Tracking No:

Due Date: 4/27/20

Created By: Jennifer Renwick

Type: Stock

Description:

Note: URF 20-522 DWG 5795 REV.A IPP REV:A NEW ISSUE 20.31.01 JV VERF:DD

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard Setup Hrs	Run Hrs	Workcenter/Supplier	Lead Time	Sign-off
100	Large Fab - Basket - 1	12 pcs	4/27/20		0.00	1.20	Large Fab - 1		
							Large Fab - 10		
							Large Fab - 2		
							Large Fab - 3		
							Large Fab - 4		
							Large Fab - 5		
							Large Fab - 6		
							Large Fab - 7		
							Large Fab - 8		
							Large Fab - 9		
							Large Fab - 11 (Various)		
							Large Fab - 12		
110	QC 5	12 pcs	4/27/20		0.00	0.00	QC 5 - 10		
							QC 5 - 12		
							QC 5 - 17		
							QC 5 - 18		
							QC 5 - 19		
							QC 5 - 22		
							QC 5 - 24		
							QC 5 - 3		
							QC 5 - 43		
							QC 5 - 49		
							QC 5 - 51		
							QC 5 - 58		
							QC 5 - 68		
							QC 5 - 9		
							QC 5 - 50		
							QC 5 - 30		
							QC 5 - 40		
							QC 5 - 61		
							QC 5 - 81		

D/L
40
MAR 17 2020 9:30

Plex 3/12/20 8:08 AM Dart.lajeunesse.marie

120 Packaging 3-1 - Stock - B4B 12 pcs	4/27/20	0.00 0.00	Packaging 3 - 1 - B4B	
			Packaging 3 - 2 - B4B	
			Packaging 3 - 3 - B4B	
			Packaging 3 - 4 - B4B	
			Packaging 3 - 5 - B4B	
			Packaging 3 - 6 - B4B	
			Packaging 3 - 7 - B4B	
			Packaging 3 - 8 - B4B	
			Packaging 3 - 9 - B4B	
			Packaging 3 - 10 - B4B	
			Packaging 3 - 11 - B4B	MAL
			Packaging 3 - 12 - B4B	
			Packaging 3 - 13 - B4B	
			Packaging 3 - 14 - B4B	
			Packaging 3 - 15 - B4B	
			Packaging 3 - 16 - B4B	
			Packaging 3 - 17 - B4B	
			Packaging 3 - 18 - B4B	
			Packaging 3 - 19 - B4B	
			Packaging 3 - 20 - B4B	
			Packaging 3 - 21 - B4B	
			Packaging 3 - 22 - B4B	
			Packaging 3 - 23 - B4B	
			Packaging 3 - 24 - B4B	
			Packaging 3 - 25 - B4B	
			Packaging 3 - 26 - B4B	
			Packaging 3 - 27 - B4B	
			Packaging 3 - 28 - B4B	
			Packaging 3 - 29 - B4B	
			Packaging 3 - 30 - B4B	
			Packaging 3 - 31 - B4B	
			Packaging 3 - 32 - B4B	
			Packaging 3 - 33 - B4B	
			Packaging 3 - 34 - B4B	
			Packaging 3 - 35 - B4B	
			Packaging 3 - 36 - B4B	
			Packaging 3 - 37 - B4B	
130 QC 21 - SA	12 pcs	4/27/20	0.00 0.00	QC 21 - SA - 21
				QC 21 - SA - 70
				QC 21 - SA - 53

Part Op 100 - 1- Cut as per dwg 2- Debur

Descriptions: 110 - QC5- inspect part completeness to step on W/O

120 - Identify as per dwg & Stock Location: *W/O*

130 - QC21- Final Inspection - Work Order Release

MAR 17 2020

Job BOM

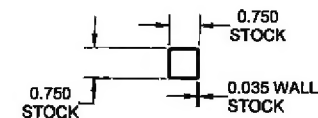
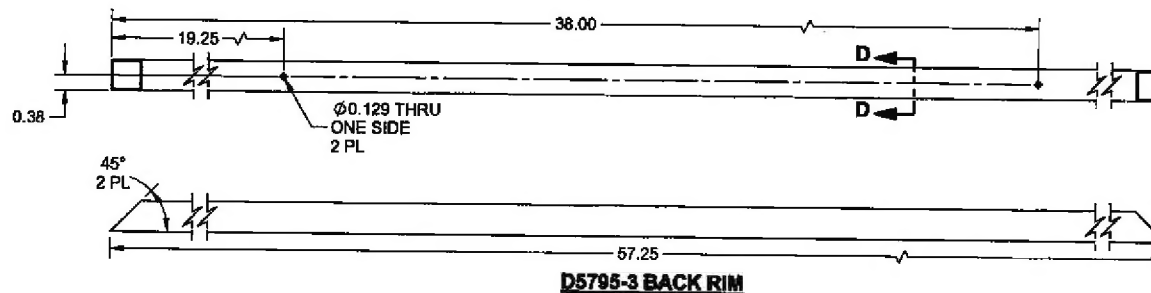
Part / Item	Component Name	Quantity	Operation	Container
M4130NTS0.750W.035	4130 Square Tube 0.750 X 0.035W	21.0996 ft (1.7583 ea)	100-Large Fab - Basket - 1	5 250794

Job Allocations

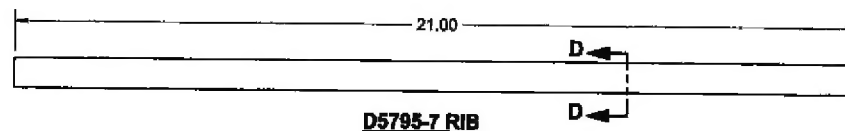
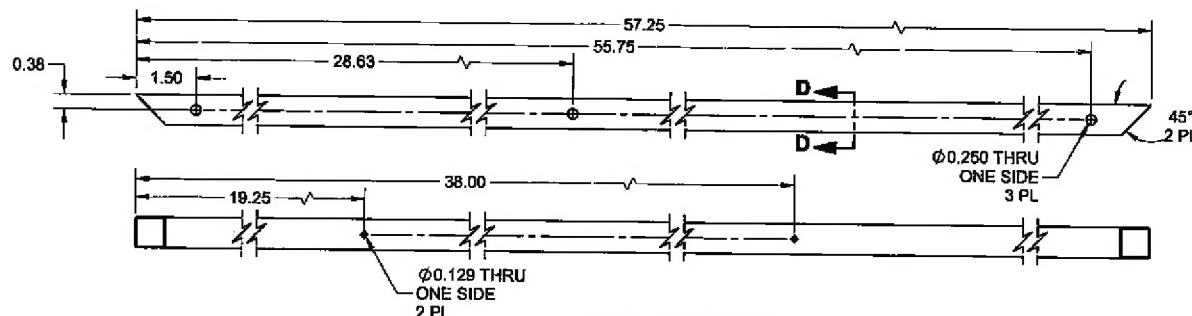
Operation	Component Part	Required	Inventory	Allocated
100-Large Fab - Basket - 1	M4130NTS0.750W.035	21	324	0

Part Specifications

Specifications could not be found.



SECTION D-D



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 2075 R 1115

2003-12

UNDER REVIEW

URF 2020-522 20.02.14 (NO)

NOTES:

- 1) MATERIAL: AISI 4130N STEEL SQUARE TUBING, 3/4 X 0.035 WALL
PER MIL-T-6738 OR AMS 6371/6360/6361/6362/6373/6374
REF DART SPEC M4130N-TS0.750W.035
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: -3/-5: 1.55 lbs
-7: 0.58 lbs

RELEASED

2020 FEB 18 NO

APPROVED

DESIGN	ZF	DART AEROSPACE LTD	
DRAWN	ZF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	KPT	DRAWING NO.	REV. A
MFG. APPR.	DD	D5795	SHEET 3 OF 8
APPROVED	NO	TITLE	SCALE
DE APPR.	CP	SHORT LID ASSY	NTS
DATE	20.01.15	COPYRIGHT © 2020 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS UNDERSTANDING THAT IT IS NOT TO BE REPRODUCED OR COPIED OR DISSEMINATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **POHB045594**



Supplier: FAC001-VU
Factory Steel
14020 Oakland Ave.
Detroit, MI 48203 USA
Phone: 313 883 6300
Fax: 313 883 4883

PO No: POHB045594

PO Date: 1/16/20

Due Date: 2/4/20

Purchase Order

Revision:

Revision Date:

Ship-To Contact: Phone:

JAN 16 2020

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pynt Terms: Net 30

Freight Terms:

Special Comments:

Items													
Line Item	Job	Part	Drawing	Supplier Part No	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1		M4130NTS0.750W.035			4130 Square Tube 0.750 X 0.035W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	600 ft	0 ft	600 ft	\$7.25/ft	\$4,350.00
2		M4130NTS1.000W.065			4130 Square Tube 1.000" X 1.000" X 0.065"W : MATERIAL: AISI 4130N STEEL SQUARE TUBING PER ONE OF THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371, 6390, 6361, 6362, 6373 OR 6374	Firmed	-	2/4/20	160 ft	0 ft	160 ft	\$11.70/ft	\$1,872.00
Grand Total:												\$6,222.00	

Plex 1/16/20 11:38 AM Dart.Lavoie, Chantal

PACKING LIST

No. 67371

PG 1 OF 1

FACTORY STEEL & METAL SUPPLY 14020 OAKLAND AVENUE DETROIT, MI 48203 (313)883-6300 PHONE (313)883-4883 FAX		CUSTOMER PO POHB045594		BUYER CHANTEL LAVOIE Tel (613) 632-3336 Fax (613) 632-4443		SHIP DATE 01/21/2020	
		CUSTOMER JOB		SALES ORDER 60306		ORDER DATE 01/16/2020	
SOLD TO DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7		SHIP TO DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7		SALES REP MICK HALON		RESALE # 59-2958719	
				SHIP INST CALL WHEN READY		CARRIER TRUCK	
				PRO#		BLIND Y/N N	
				TERMS NET 30 DAYS		FOB DETROIT	

LINE	QUANTITY	DESCRIPTION	WIDTH	LENGTH	WEIGHT
1	609.917 FT	4130N CD SMLSS SQ TUBE 3/4" X .035W Tag M111 Ref # Heat 153513 023679 616506	Pcs Length 26 20' / 24' RL	20' / 24' RL Feet 609.917	207.554 Weight 207.554
2	171.333 FT	4130N CD SMLSS SQ TUBE 1" X .065W Tag M111 Ref # Heat 153514 072143 072067859	Pcs Length 7 22' / 23' RL	22' / 23' RL Feet 171.333	141.606 Weight 141.606
3	1 PCS	PACKING CHARGES MTRS (CIRCLE) FAX SHIPMENT INVOICE ALL DATE: _____ INITIAL: _____			

TOTAL WT													
349 LBS													

RECEIVED BY - SIGNATURE	RECEIVED BY - PRINTED NAME	DATE RECEIVED

LIWEI

MATERIAL RECEIPT INSPECTION FORM

MATERIAL: M4130NTS 0.750W 035 PO / BATCH NO.: POMB045594
 DATE: JAN 27 2020 5250794

MATERIAL CERT REC'D: YES
 QUANTITY RECEIVED: 609 PL
 QUANTITY INSPECTED: 609 PL
 QUANTITY REJECTED: 0

THICKNESS ORDERED: .750W.035
 THICKNESS RECEIVED: .750W.035
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	(N)	
CORRECT FINISH	(Y)	N	
CORROSION	Y	(N)	
CORRECT GRAIN DIRECTION	(Y)	N	
CORRECT MATERIAL PER M-DRAWING	(Y)	N	MIL-T-6736
CORRECT THICKNESS	(Y)	N	
PHOTO REQUIRED	Y	(N)	
CORRECT REF # TO LINK CERT	(Y)	N	616506
CORRECT MATERIAL IDENTIFICATION	(Y)	N	
CORRECT M# ON THE MATERIAL	(Y)	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	(Y)	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	(N)	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
	HRC	HRB	DUR A	DUR D	WEBSTER
TYPE OF MATERIAL					
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 13 INSPECTION		ENGINEERING SIGNOFF (if required)	
INSPECTED BY: _____	DATE: <u>JAN 27 2020</u>	SIGNED OFF BY: _____	DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in

LIVE 1
M4130NTS 0.750W.035

S250794

616506



DESIGN DH	DRAWN BY DH	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED [Signature]	APPROVED [Signature]	DRAWING NO. M4130N-TS	REV. A SHEET 1 OF 1
DATE 05.02.09		TITLE 4130N SQUARE TUBING	SCALE NTS
A	05.02.09	NEW ISSUE	

PURCHASE MATERIAL:

AISI4130N STEEL SQUARE TUBING PER ONE OF
THE FOLLOWING SPEC'S: MIL-T-6736, AMS 6371,
6360, 6361, 6362, 6373 OR 6374

DAS
82
9-88

PART NUMBER: M4130N-TS | A.AAA | W | .TTT |

WHERE A.AAA = WIDTH IN INCHES
TTT = WALL THICKNESS IN INCHES

EXAMPLE: 0.50" X 0.035" WALL = M4130N-TS0.500W.035

RELEASED
05.02.09 [Signature]

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PLYMOUTH TUBE CO.

1288 East 12th Street, St. Clair, Illinois 61881
Phone: (815) 673-1615 Fax: (815) 673-7548

TRUST YOUR SOURCE ACCEPT NO SUBSTITUTION



PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

175629 - 1 / 0

SHIP TO

Factory Steel & Metal Supply C
14020 Oakland Avenue
Detroit, MI 48203
USA

WORK ORDER 023679

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Benteler Steel & Tube-Germany

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE								
3887	SQ-N34035			/									
PART DESCRIPTION SHSQ0750035J300 ***** Square OD ***** Side1: 0.7500 Max:0.7600 Min:0.7400 Side2: 0.7500 Max:0.7600 Min:0.7400 Wall: 0.0360 Max:0.0380 Min:0.0320 Length: 10.00/26.00 Spec: MIL-T 6736B Seamless Aircraft Grade: 4130 Anneal: Cond N <div style="text-align: right;">DAS 82 9-89</div>													
CERTIFICATION REQUIREMENTS FAR BAA (FAR 52.225-1 Buy America Act Supplies), DFARS 252.225-7001 Buy America Act & Bal. of Payments Program FAR TAA (FAR 52.225-5 Trade Agreements)(Paragraph 1,3,4,5)This material was fully inspected and conforms to the requirements of ASTM A-450. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2640J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method. Additional Specifications - AMS-T 6736B, 6360P & 6371L. Material produced in accordance to ASTM A-519-17 and MIL-T 6736B. This material meets Plymouth ProMoly specifications. Jominy results: J(5/16")=45 J(8/16")=38													
Chemical Analysis													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.310	.55	.011	.002	.230	.036	.87	.18	.12	.001	.16	.002	.002	.010
Physical Properties													
Freq.	Severity	Grain Size											
.020	.015	9											
Mechanical Properties													
TEST	UNITS	#TESTS	HIGH	LOW	AVERAGE	STD-DEV							
Tensile	Psi	6	126660	125480	126065	482							
Yield	Psi	6	120930	119880	120367	374							
Elongation	%	6	21	20	20	1							
Rockwell C	Rc	6	25	25	25	0							
TEST	RESULT												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streater in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

James D. Carroll
Quality Assurance

①



PLYMOUTH TUBE CO.

1285 East 128th Street, Stretor, Michigan 48360
Phone: (810) 673-1916 Fax: (810) 673-7343

TRUST YOUR SOURCE, ACCEPT NO SUBSTITUTION



PRODUCT CERTIFICATION

SALES ORDER - LINE / RLS

175629 - 1 / 0

SHIP TO

Factory Steel & Metal Supply C
14020 Oakland Avenue
Detroit, MI 48203
USA

WORK ORDER 023678

PCS/HEAT 0

HEAT NUMBER 616506

MELT SOURCE Bunteler Steel & Tube-Germany

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	CERT ID / REV	CERT DATE
3887	SQ-N34035			/	

PART DESCRIPTION SHSQ0750035J300

Additional Specification(s)

TEST	UNITS	#TESTS	HIGH	LOW	AVERAGE	STD-DEV
Brinell	Brinell	6	253	253	253	0

This test report data is for the heat Chemistry Stated above.

The material in this test report is:

- 1) Drawn in the USA
- 2) Free from Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers (PBDE), and Mercury contamination.
- 3) NAFTA compliant.

End of Certification

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Stretor in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

Quality Assurance

Entered: _____ Date: _____



WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. _____

Route update only ☐

Job: _____ Part No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/>	DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Cross tube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> </div> <div> Eng. (Non-AW) <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Water Jet <input type="checkbox"/> Supplier Quality <input type="checkbox"/> </div> </div>			
Date :	Sequence #:	QTY Affected :		MRB (QSI042)	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor	
Root Cause <div style="display: flex; flex-direction: column;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div>		FAULT CATEGORY <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Bending <input type="checkbox"/> Crushing <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Mislabeled </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Incomplete/Unclear Instructions <input type="checkbox"/> Drill Holes <input type="checkbox"/> Fit/Function </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain Direction <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Off-set/Set-up </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Outside Tolerance <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Misread </div> </div>			
Other/Details:					